



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,077	03/19/2004	Ki-man Kim	116511-00125	7048
27557	7590	01/11/2006	EXAMINER	
BLANK ROME LLP 600 NEW HAMPSHIRE AVENUE, N.W. WASHINGTON, DC 20037			BOEHLER, ANNE MARIE M	
			ART UNIT	PAPER NUMBER

3611

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,077

Applicant(s)

KIM, KI-MAN

Examiner

Anne Marie M. Boehler

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,5,7-9 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-3,6, 10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6 sheets.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 3611

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Oswald (USPN 4,572,311).

Oswald shows a driving device including a body 10, a frame unit 12, a pair of drive motors 30, a pair of driving wheels 24, a pair of driven wheels 22, and a chain 64 for linking drive of the drive and driven wheels. Hydraulic cylinders 286 that may act as shock absorbers are disposed on the frame to cushion movement of the frame unit.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song (PGPub 2002/0153184) in view of Oswald.

Song shows a robotic cleaner including a body 10, a pair of motors 15e, 15f, driving wheels 15c, 15d, and driven wheels 15a, 15b connected to the driving wheels by chain transmissions. It shows a top cover (a dome shown in Fig. 8) and a bottom 10a with multiple cover elements including a disc-shaped bottom, a controller cover 18 and a suction unit cover 11, as broadly recited.

Song lacks a shock-absorbing unit.

Art Unit: 3611

Oswald shows a driving device including a body 10, a frame unit 12, a pair of drive motors 30, a pair of driving wheels 24, a pair of driven wheels 22, and a chain 64 for linking drive of the drive and driven wheels. Hydraulic cylinders 286, that may act as shock absorbers, are disposed on the frame to cushion movement of the frame unit.

It would have been obvious to one of ordinary skill in the art to provide the Song vehicle with a shock absorbing unit, as taught by Oswald, in order to traverse difficult terrain. It would also have been obvious to directly connect the motors to the driving wheel, in order to reduce the hardware required.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oswald in view of Zollinger (USPN 5,819,863).

Oswald does not show the drive motors directly connected to the drive wheels.

Zollinger shows a vehicle with multiple driven wheels on each side of the vehicle body. A motor 170 is directly connected to each driving wheel and the driving wheel is drivingly attaché via a chain transmission to a driven wheel.

It would have been obvious to one of ordinary skill in the art to connect the motor directly to the driving wheel, as taught by Zollinger, in order to eliminate hardware for connecting the motor and the driving wheel.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oswald in view of Turbowitz et al. (USPN 4,540,376).

Oswald lacks saw-serrated circumferences for the wheels.

Turbowitz shows a vehicle with serrated tires 22.

It would have been obvious to one of ordinary skill in the art to provide the Oswald wheels with saw-serrated wheel surfaces, as is old and well known and taught by Turbowitz, in order to improve traction.

7. Claims 4, 5, 7-9, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Song and Yokoi each teach a round, low robotic cleaner.

Allin shows a vehicle with a pivotal housing and driving and driven wheels connected by a chain transmission.

Tubman, Okano, and Ball shows wheels interconnected by a chain transmission.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne Marie M. Boehler whose telephone number is 571-272-6641. The examiner can normally be reached on 7:30-5:00, Monday-Thursday, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 571-272-6612. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 1/6/06
Anne Marie M. Boehler
Primary Examiner
Art Unit 3611

amb